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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
PARK, JEONG S	

ART UNIT	PAPER NUMBER
2154	

NOTIFICATION DATE	DELIVERY MODE
07/03/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/763,135	DAN ET AL.	
	Examiner	Art Unit	
	JEONG S. PARK	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3/31/2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *34-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *34-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/27/2008*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to communications filed March 31, 2008.

Response to Arguments

2. Applicant's arguments with respect to claims 34-54 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 34-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herington (U.S. Pub. No. 2005/0102387 A1) in view of Sankaranarayan et al. (hereinafter Sankaranarayan)(U.S. Patent No. 6,799,208 B1).

Regarding claim 34, Herington teaches as follows:

a method for supporting a application workloads (interpreted as one application 255 in figure 2) across multiple domains (server clusters, 220 and 233 in figure 2)(see, e.g., page 1, paragraph [0014], the method comprising:

receiving a request from a client (clients 202-206 in figure 2) to execute a first application workload on a first server cluster at a first domain (cluster 220 or 230 in figure 2)(clients issue transactions to application via a network to communicate with clusters, see, e.g., page 1, paragraph [0015]), the first server cluster at the first domain including a plurality of server nodes (nodes 240-250 in figure 2)(the clusters each

comprise a plurality of nodes, see, e.g., page 1, paragraph [0014]);

identifying a service level agreement negotiated with the client for the first application workload, the service level agreement (performance goals, see, e.g., page 2, paragraph [0022]) specifying performance requirements for execution of the first application workload on the first server cluster at the first domain (the incorporated Romero et al. (hereinafter Romero)(U.S. Pub. No. 2002/0069279 A1) teaches an apparatus and method for routing a transaction to a server based on a requested level of service associated with the transaction, see, e.g., abstract);

assigning a subset of the plurality of server nodes in the first server cluster at the first domain to execute the first application workload (load balancer monitors service levels provided by each node of cluster and routes transactions to one of the nodes based on the level of service that the node is providing, see, e.g., page 2, paragraph [0019]);

monitoring execution of the first application workload (performance information) on the subset of server nodes assigned to execute the first application workload to determine whether the performance requirements for execution of the first application workload specified in the service level agreement are being met (workload manger receives performance information from applications, see, e.g., page 2, paragraph [0023]);

responsive to a determination that the performance requirements for execution of the first application workload specified in the service level agreement are not being met, sending a request to a second domain to assign one or more of a plurality of server

nodes in a second server cluster at the second domain to the execution of the first application workload (workload manager dynamically allocate and adjust computer resources between applications based on performance goals and performance information, see, e.g., page 2, paragraph [0024]);

wherein a second application (application 260 in figure 2) workload is executing on the second server cluster (node 250 in figure 2) at the second domain while the first application (application 255 in figure 2) workload is executing on the first server cluster (node 240 in figure 2) at the first domain (two node 240 and 250 are respectively dedicated to two different applications, see, e.g., page 1, paragraph [0014]); and

wherein the request sent to the second domain specifies a number of server nodes requested, a duration in which the number of server nodes requested will be needed, and a dollar value associated with the request (workload manager dynamically allocate and adjust computer resources between applications based on performance goals and performance information, see, e.g., page 2, paragraph [0024]).

The incorporated McCarthy et al. (hereinafter MaCarthy)(U.S. Patent No. 7,228,546 B1) further teaches that the workload manager allocates application's partition bases on the goal information and priority information from a user or administrator and performance information (see, e.g., col. 2, lines 27-40). Therefore it is inherent to assign full resource capacity for one application.

Herington does not teach reassigning the number of nodes but reassigning computer resources.

Sankaranarayan teaches as follows:

resource manager (102 in figure 2) assigns resources to all descriptors contained in the listed activities using a provider supplied resource allocation function in a priority based scheme, see, e.g., col. 11, lines 45-62 and figure 3);

resource allocation process using priority-based preemption (see, e.g., col. 14, lines 55-59 and figure 6);

reallocating the resource from lower priority activity to the higher priority activity (see, e.g., col. 15, lines 8-48 and figure 6); and

building one or more configurations describing various sets of resources required to perform the application activity (see, e.g., col. 9, lines 7-18); and

the configurations contain descriptors to identify corresponding resource providers that control the resource required to perform the task and to specify the amounts of those resources that are needed (see, e.g., col. 9, lines 19-34).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Herington to include a resource manager allocating a resource provider depends current request from clients as taught by Sankaranarayan in order to efficiently allocate the intersecting nodes (242-248 in figure 2) to one of applications (255 or 260) based on the current request from clients.

Also it would have been obvious for one of ordinary skill in the art at the time of the invention to modify Herington to specify a number of server nodes requested, a duration in which the number of server nodes requested will be needed, and a dollar value associated with the request as the configurations taught by Sankaranarayan.

Regarding claim 35, Herington in view of Sankaranarayan as presented above per claim 34 for all the limitations on claim except for predicting performance requirements in the service level agreement.

The incorporated Romero teaches that the server index can be based on known capabilities and predicted service levels of the servers in the server pool based on past performance (see, e.g., page 4, paragraph [0033]).

Regarding claims 36-38 and 40-42, Herington teaches all the limitations of claims except for communications between the resource requestor and the resource providers regarding allocating available resources based on performance requirements and available resources.

Sankaranarayan teaches as follows:

the resource allocation process based on the received request from the application and available resources from the provider (see, e.g., col. 14, line 55 to col. 15, line 54 and figure 6);

the resource manager asks each resource provider identified in the configuration to determine whether it can allocate its resource to the activity (see, e.g., col. 14, lines 60-67 and step 602 in figure 6); and

the resource manager continues successively through each fallback configuration (see, e.g., col. 17, lines 51-64) until finding a configuration that can be satisfied with the currently available resources or discovering that no fallback configuration can be satisfied (see, e.g., col. 17, line 65 to col. 18, line 17).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Herington to include negotiating method between the resource requester and the resource providers as taught by Sankaranarayan in order to efficiently allocate the available resources to the resource requester based on the availability of resources at the time of requests.

Regarding claim 39, Herington in view of Sankaranarayan teaches all the limitations of claim as presented above per claims 34 and 35.

Regarding claims 43 and 44, Sankaranarayan teaches as follows:

building one or more configurations describing various sets of resources required to perform the application activity (see, e.g., col. 9, lines 7-18); and

the configurations contain descriptors to identify corresponding resource providers that control the resource required to perform the task and to specify the amounts of those resources that are needed (see, e.g., col. 9, lines 19-34).

It would have been obvious for one of ordinary skill in the art at the time of the invention to modify Herington to specify the dollar value associated with the request is a payment amount as the configurations taught by Sankaranarayan.

Also, it is well known in the art at the time of the invention to include the penalty function in the SLA.

Regarding claims 45-48, the plurality of nodes are server computers (see, e.g., page 1, paragraph [0014]) are capable of running any applications including stock trades as a transaction application and optimization of a stock portfolio as a parallel application.

Regarding claim 49, Romero teaches as follows:

wherein the performance requirements for execution of the transaction application workload specified in the service level agreement comprises throughput requirements (the requested level of service can be a specific parameter such processing capacity, see, e.g., page 2, paragraph [0023]).

Regarding claim 50, Herington teaches as follows:

wherein the performance requirements for execution of the transaction application workload specified in the service level agreement comprises response time requirements (performance goals include response time, see, e.g., page 2, paragraph [0022]).

Regarding claim 51, Romero teaches as follows:

wherein the performance requirements for execution of the transaction application workload specified in the service level agreement comprises availability requirements (status of a particular server such as availability, see, e.g., page 3, paragraph [0027]).

Regarding claims 52 and 53, it is well known in the art at the time of the invention to include the downtime requirement and penalty function in the SLA.

Regarding claim 54, Herington teaches as follows:

monitoring one or more of a transaction rate, a transaction response time, availability of a server node, and utilization of a server node (workload manger receives performance information from applications, see, e.g., page 2, paragraph [0023]).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEONG S. PARK whose telephone number is (571)270-1597. The examiner can normally be reached on Monday through Friday 7:00 - 3:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. S. P./
Examiner, Art Unit 2154

June 25, 2008

/Joseph E. Avellino/
Primary Examiner, Art Unit 2146